



# Cisco Cloud Services Platform Release Notes, Release 2.3.1

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## Cisco Cloud Services Platform Release Notes

This document describes the features and limitations for the Cisco Cloud Services Platforms 2100 and 5000, Release 2.3.1.

### Information About Cisco Cloud Services Platform

Cisco Cloud Services Platform is a software and hardware platform for data center network functions virtualization. This open kernel virtual machine (KVM) platform, with Red Hat Enterprise Linux (RHEL) 7.3 as the base operating system, is designed to host networking virtual services. Cisco CSP provides REST APIs, a web interface, and a CLI for creating and managing the virtual machine (VM) lifecycle.

### Supported Cisco Networking Services

Cisco CSP can host any Cisco or third-party VNF that is supported on KVM hypervisor. Some of the Cisco VNFs available include the following:

- Cisco Cloud Services Router (CSR) 1000V virtual router
- Cisco IOS® XRv 9000 Router
- Cisco Adaptive Security Virtual Appliance (ASAv)
- Cisco Firepower™ NGFW Virtual
- Cisco Prime® Virtual Network Analysis Module (vNAM)
- Cisco Virtual Wide Area Application Services (vWAAS)
- Cisco Web Security Virtual Appliance (WSAv)
- Cisco Virtual Security Gateway (VSG) for Cisco Nexus® 1000V Series Switch deployments
- Cisco Virtual Supervisor Module (VSM) for Cisco Nexus 1000V Series Switch deployments
- Cisco Data Center Network Manager (DCNM)

### New Features and Enhancements

Cisco CSP Release 2.3.1 includes the following features and enhancements along with security and bug fixes:

Feature	Description
VNF export over NFS	Supports exporting VNFs directly to NFS-mounted storage. Previously, you could only export VNFs to a local disk.
NFS storage management	Supports copying images and other files between local and NFS-mounted storage, or between NFS-mounted storages through the web interface. Also, supports uploading files to NFS storage through the web interface.
Live VNF export	Supports live export of VNFs with no traffic loss. Previously, exporting powered on VNFs caused the VNFs to be paused when export was in progress, which caused traffic loss.
SPAN for VNICs	Supports SPAN for virtio VNICs and supports starting or stopping packet capture, and downloading the captured data files through the web interface.
Cluster image management	Supports copying files between cluster nodes by using the web interface.
Super admin role	Only admin user who is part of the superadmin group has privileges to create users or groups.
Enforce VNC password complexity	Enforce more stringent rules for VNF VNC password selection.
VNF grouping role extension	VNF grouping has been extended to include 3 permission levels; full access, read and service login, and read only.
Historical Resource Utilization	Supports providing system-wide CPU, memory, and disk utilization for up to 30 days via graphs in the web interface.
PNIC Statistic display	Supports displaying PNIC detailed information, and receive and transmit statistics through the web interface.
System level help navigation	Web links to CSP Release notes, Command Reference, and REST API Guides in the web interface.
Log files list and download capability	Supports a new page on the web interface that lists all log files and provides a downloading option.
Link state tracking	Supports enabling link state tracking per PNIC. All virtio VNICs attached to the PNIC via an OVS bridge will track the PNIC link state.
Support for an extra VNF disk	Increased the number of extra disks supported per VNF from 2 to 3.
SR-IOV VNIC Spoof check	Supports enabling or disabling spoof check on per SR-IOV VNIC.
New CSP 5000 series hardware support	Starting with Release 2.3.1, CSP software is supported on both CSP 2100 and CSP 5000 hardware platforms.



**Note** The **Delete Cluster** button on toolbar enables deleting cluster configuration along with all members of a cluster.

## Configuration Limits

Use the following configuration limits for Cisco CSP.

Component	Supported Limits
Number of services in a node with hyperthreading disabled	<ul style="list-style-type: none"> <li>For Cisco CSP with 8 or less than 8 cores, you can deploy the following number of VM cores: <i>Number of Cores – 1</i> For example, for Cisco CSP with 8 cores, you can deploy 7 VM cores.</li> <li>For Cisco CSP with greater than 8 and less than or equal to 16 cores, you can deploy the following number of VM cores: <i>Number of Cores – 2</i> For example, for Cisco CSP with 16 cores, you can deploy 14 VM cores.</li> <li>For Cisco CSP with greater than 16 cores, you can deploy the following number of VM cores: <i>Number of Cores – 4</i> For example, for Cisco CSP with 36 cores, you can deploy 32 VM cores.</li> </ul>
Total number of nodes in a cluster	10
Number of vNICs per service	24

## Important Notes and Restrictions

The following topics provide important notes and restrictions for Cisco CSP.

### Hyper-Threading Technology Support

Cisco CSP hardware supports Hyper-Threading (HTT). However by default, HTT is disabled and must be kept disabled, as it is not supported. This action avoids VNFs sharing same CPU cores, cache and memory bus that can result in stalls or latency issues, and VNF data plane performance degradation. The enablement or disablement of Hyper-Threading is done by CIMC on CSP 5000 hardware.

### Changing IP Address of the Management Interface for NFS Configurations

If NFS is configured on the system, note the following:

- Changing the management IP address causes an outage of the VNC console and stats collection for 15 to 30 minutes.
- Reboot of the system can take up to 30 minutes.

As a workaround, you can unconfigure the NFS mount before performing these operations and reconfigure the NFS mount after the operation is complete. You can also reboot the system from the Cisco CSP CIMC connection.

## Configuring Passthrough Interfaces

When a service has passthrough as well as non-passthrough vNICs, we recommend that you first define the non-passthrough vNICs and then define the passthrough vNICs.

## Running config terminal Command After Initial Setup

The **config terminal** command fails when you run it after performing the initial setup for a new installation. This happens because the admin user is not assigned to a group at the initial login. To run this command and configure Cisco CSP features, you must log out and then log in to Cisco CSP.

## Network Interface Card (NIC) Driver Compatibility

This release includes the following NICs Physical function (PF) drivers. See VNF documentations for more information about compatibility between the Virtual function (VF) driver included in VNF and the NICs PF drivers.

- Ixgbe PF driver version: 5.3.3
- I40e PF driver version: 1.6.27-k

## Spectre and Meltdown Firmware Update

This release include fixes for spectre and meltdown issue in Cisco CSP software. For firmware update, update the CIMC version to 4.0(1a). See the Cisco UCS C-Series Software Release Notes for more information about CIMC version at [https://www.cisco.com/c/en/us/td/docs/unified\\_computing/ucs/release/notes/b\\_UCS\\_C-Series\\_RN\\_4\\_0\\_1.html](https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/release/notes/b_UCS_C-Series_RN_4_0_1.html).

## Restrictions

Cisco CSP has the following restrictions:

- Management interfaces cannot be configured as passthrough interfaces.
- Only local admin users have the functionality to autcopy images in repositories across the Cisco CSP nodes in a cluster. This functionality is not available for the TACACS+ or RADIUS admin users.
- Only local users can log in to Cisco CSP using CIMC console. Remote TACACS+ users cannot log in to Cisco CSP by using CIMC console.
- Only the vNIC e1000 model is supported with Cisco VSM and Cisco VSG services.
- Only ISO image files are supported with Cisco VSM and Cisco VSG services.

## Using the Bug Search Tool

Use the Bug Search Tool to search for a specific bug or to search for all bugs in a release.

## Procedure

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**Step 1** Go to the [Cisco Bug Search Tool](#).

**Step 2** In the Log In screen, enter your registered Cisco.com username and password, and then click **Log In**. The Bug Search page opens.

**Note** If you do not have a Cisco.com username and password, you can register for them at <https://tools.cisco.com/RPF/register/register.do>.

**Step 3** To search for a specific bug, enter the bug ID in the **Search For** field and press **Enter**.

**Step 4** To search for bugs related to a specific release, do the following:

- a) In the Product field, choose **Series/Model** from the drop-down list and then enter **Cisco Cloud Services Platform 2100** or **Cisco Cloud Services Platform 5000** in the text field.
- b) In the Releases field, choose a criteria from the drop-down list and then enter a release number in the text field.
- c) Press **Enter**.

When the search results are displayed, use the filter tools to find the types of bugs you are looking for. You can search for bugs by status, severity, modified date, and so on.

**Tip** To export the results to a spreadsheet, click the **Export Results to Excel** link.

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## Related Documentation for Cisco Cloud Services Platform

This section lists the documents used with the Cisco Cloud Services Platform and available on Cisco.com at the following URL:

<https://www.cisco.com/c/en/us/support/switches/cloud-services-platform-5000/tsd-products-support-series-home.html>

### General Information

*Cisco Cloud Services Platform Release Notes*

### Install and Upgrade

*Cisco Cloud Services Platform Quick Start Guide*

*Cisco Cloud Services Platform Hardware Installation Guide*

*Regulatory Compliance and Safety Information for Cisco Cloud Services Platform*

### Configuration Guide

*Cisco Cloud Services Platform Configuration Guide*

### Reference Guides

*Cisco Cloud Services Platform Command Reference Guide*

*Cisco Cloud Services Platform REST API Guide*

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see [What's New in Cisco Product Documentation](#).

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the [What's New in Cisco Product Documentation RSS feed](#). RSS feeds are a free service.

